NOAA Teacher at Sea Aids Gulf Oil Spill Research Efforts

Bruce Taterka, a high school teacher from Mendham, N.J., spent seven days aboard the NOAA ship *Oregon II* in July as part of NOAA's Teacher at Sea program.

High resolution (Credit: NOAA)

Who says a classroom consists of four walls, desks and a blackboard?

Certainly not Bruce Taterka, a NOAA **Teacher at Sea** who journeyed through the Gulf of Mexico in July onboard the NOAA Ship ***Oregon II***.

Taterka, a high school science and social studies teacher from NJ's Mendham High School, was among 10 teachers who helped NOAA's seafaring scientists in the Gulf with everything from habitat assessments, sorting catches and collecting seafood samples to searching for subsurface oil.

Taterka spent his seven days aboard the *Oregon II* helping scientific teams conduct fish surveys and oil spill-focused research. We recently caught up with Taterka to get a first-hand account of what it was like to be in the Gulf during this unprecedented disaster:

Teacher Bruce Taterka holds up a red snapper caught while onboard the NOAA ship *Oregon II* in July. The fish was later tested for oil contamination at the National Seafood Inspection Lab following the cruise.

High resolution (Credit:NOAA)

Q: How did you feel when you found out that were accepted into the Teacher at Sea program and that your trip would take you into the Gulf of Mexico in the midst of the oil spill?

At first, I was thrilled just to be accepted into the TAS program. I already knew the value of working with scientists doing cutting-edge field research from my previous experience working with researchers in the forests of Ecuador. Such trips provide wonderful hands-on experiences that you can bring back to the classroom to engage students — it's much better than anything you can find in a textbook or on YouTube.

The spill occurred about two weeks after I already knew I was going to the Gulf, so that just made the trip all the more interesting — especially since the mission now included research related to the oil spill response. It's amazing that the TAS program put me in the middle of one of the biggest environmental disasters in US history – you can't get much more hands-on than that.

Teacher Bruce Taterka helps haul in a trawl net used to collect fish samples that will contribute toward the Southeast Area Monitoring and Assessment Program (SEAMAP) survey.

High resolution (Credit:NOAA)

Q: What did you see or experience while onboard the *Oregon II* that related to the BP Deepwater Horizon oil spill?

I was on the second leg of NOAA's summer **SEAMAP** survey in the western Gulf (off the coast of Texas) almost the entire time, and there was no visible oil in the areas I visited. However, a lot of the work we did was directed toward measuring whether there was any impact from the spill in that area. We also trawled round-the-clock collecting seafood samples — red snapper, shrimp, and other species — to be tested for oil and chemical contamination at NOAA's **National Seafood Inspection Lab**.

It was also really interesting to see how many drilling platforms there are in the Gulf. Given the large volume of oil released from just one rig and the technical challenges in capping that well, it makes you realize just how great of a potential risk they pose to the Gulf. It also makes you realize how important NOAA's mission is to provide a scientific understanding of what's going on in the Gulf ecosystem.

Teacher at Sea Bruce Taterka analyzes a water sample in the lab while onboard the NOAA Ship *Oregon II*. The samples were collected as baseline data for the long-term monitoring of oil spill impacts on the Gulf of Mexico.

High resolution (Credit:NOAA)

Q: What was the most surprising thing you learned during the research cruise?

TAS opened up a whole new way of doing scientific research for me. Before I went on my cruise, I had a general idea of the type of information that was being collected — e.g., population studies, aquatic chemistry — but I really had no idea how that information was gathered, nor did I have any appreciation for exactly how much data NOAA collects.

For instance, we trawled for fish around the clock. For every haul, we identified each species caught, weighed and measured 20 to 200 individual fish from each species, determining the sex of some. All of this information was then entered into the Fisheries Scientific Computer System.

We also collected information on ocean chemistry using a conductivity-temperature-depth instrument, also known as a **CTD**, and collected larval fish and **plankton** using **bongos** and **nueston nets**.

Every day, the *Oregon II* gathered huge amounts of data, and when you think of all of the other NOAA ships out there, it's mind-boggling.

Q: What from your Teacher at Sea experience will you share with your students this fall?

I will use every bit of my TAS experience. The lessons I learned about sampling and data collection will be used to design and carry out lab activities. My new knowledge of the Gulf ecosystem, especially the species and food webs, will assist me in teaching marine ecology.

Having learned more about low dissolved oxygen levels (i.e., hypoxia) in the Gulf, I can better teach about the impact agriculture has on the Gulf. I also now have new, first-hand knowledge about the environmental impact of oil and gas drilling on the Gulf.

Lastly, I'll use my experience as an example to encourage my students to do what I and the other Teachers at Sea did: Get out there and see things for yourself, take advantage of opportunities, explore new places and things, roll up our sleeves and get to work!

You read more about Taterka's journey aboard the *Oregon II* by visiting his **online blog**.

Teachers at Sea in the Gulf: 2010

A total of 10 teachers participated in research cruises in the Gulf of Mexico this summer:

In June, **Melinda Storey**, an elementary teacher from Birmingham, Ala., and **Nicolle von der Heyde**, an eighth-grade science teacher from the St. Louis area, took part in reef fish research aboard NOAA Ship *Pisces*. In July, **Liz Warren**, a sixth-grade teacher from Redmond, Wash., and **Anne Marie Wotkyns**, an elementary teacher in North Hollywood, Calif., joined the ship on the second leg of the reef fish survey.

Also in June, elementary school teacher, **Mechelle Shoemake**, from Laurel, Miss., took part in groundfish (bottom-dwelling fish) research aboard NOAA Ship *Oregon II*. **Kim Lewis**, a high school science teacher in Rio Grande, Ohio, and **Bruce Taterka**, a high school biology teacher in Mendham, NJ, joined the ship for the second leg of the groundfish survey.

In August and September, three teachers participated in a shark and red snapper longline survey on NOAA Ships *Delaware II* and *Oregon II*. **Beth Spear**, a high school science teacher from Salem, Wis., took part in the first leg on the *Delaware II*. On the second leg, which moved to the *Oregon II*, Annmarie Babicki, a fifth-grade science teacher from Auburn, Maine, assisted with research. On the final leg, also on the *Oregon II*, Peggy

Deichstetter, a high school science teacher from Elgin, Ill., participated.

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